**Response to Comments on Public Notice NPDES Permit and Tentative Determinations for the Papaikou Wastewater Treatment Plant**
**NPDES Permit No. HI 0021113**
**June 2, 2014**

**Comments received on April 3, 2014 from the County of Hawaii, Department of Environmental Management**

***FACT SHEET:***

1. Part B.1, Page 4, 2nd Paragraph:
   a. Add reference to coordinate system (NAD 83) utilized to establish location of Outfall Serial No. 001.

**Response:** Fact Sheet revised to include reference to NAD 83 coordinate system.

2. Part B.6, Page 6, Table F-3:
   a. Change "Permit Limitation" to "Threshold Value" and delete Footnote 1.

**Response:** Fact Sheet revised to change Table F-3 column header from "Permit Limitation" to "Permit Threshold Value" and footnote 1 revised to "[1] Permit Threshold Value – not permit violation."

3. Part D.2.c(4), Page 13 and 14, Table F-5:
   a. The "Maximum Effluent Concentration" column of Table F-5 appears to be "Maximum annual geometric means at the edge of the ZOM" as per Footnote 1.

**Response:** The format used in Table F-5 (Summary of RPA Results) is consistent with other NPDES permit fact sheets. The values in the Maximum Effluent Concentration column without Footnote 1 are the maximum effluent concentrations for those parameters (e.g., total residual chlorine). As explained in Section D.2.c (Page 11) of the Fact Sheet, "To determine reasonable potential for nutrients contained in HAR, Chapter 11-54-6, a direct comparison of the receiving water concentrations at the edge of the ZOM was compared to the most stringent WQS." Thus, for nutrients, the values in this column are the maximum annual geometric mean at the edge of the ZOM, as denoted by Footnote 1.

   b. The County also notes that it would not be reasonable to conclude that exceedances of geometric means at the edge of the ZOM are directly related to effluent concentrations as nutrient concentrations at control stations are often higher than nutrient concentrations at the edge of the ZOM.

      i. The County further notes that Control Station 5, especially, appears to be affected by surface and/or groundwater as evidenced by the low salinity values reported in the ZOM data.

      ii. The County further notes that as indicated by the DOH under Part D.2.e(4); there is a trend of lowered concentrations of ammonia nitrogen in the receiving water further validating that exceedances at the ZOM are likely affected by background concentrations.

**Response:** NPDES regulations at 40CFR 122.44(d) require effluent limitations to control all pollutants which are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard. Due to the application of nutrient criteria as a geometric mean over a calendar year and an unknown dilution at the edge of the ZOM, EPA's TSD procedures (projected maximum receiving water concentrations based on maximum effluent concentrations, dilution, and effluent variability) would not be appropriate and were not used in evaluating reasonable potential for nutrients.

The methodology that was used is consistent with the methodology used for determining reasonable potential for nutrients in other NPDES wastewater permits. The fact sheet compares annual geometric means to applicable water quality standards. Annual geometric means represent a reasonable period to observed season variations within the receiving water, and determine negative impacts on the receiving water (exceeding water quality standards at the edge of the ZOM). Annual geometric means of each zone of mixing station at each depth was compared to the water quality standard. An exceedance of water quality standards at the edge of the ZOM indicate that the discharger is causing or contributing to the exceedance of a water quality standard. Based on the effluent data, the discharger is discharging ammonia nitrogen and the receiving water has been shown to be impaired at the edge of the mixing zone, thus they are at a minimum contributing to an exceedance, and therefore have reasonable potential for these pollutants.

The receiving water data collected by the County (data from ZOM Boundary Stations 1, 2, and 3) was used in the determination of the maximum annual geometric mean and is the best representation of receiving water quality at the edge of the ZOM currently available. A requirement to evaluate the dilution and assimilative capacity has been established in the permit, and may be used during future permitting efforts to evaluate reasonable potential and calculate appropriate end-of-pipe effluent limitations. If assimilative capacity is available, and additional data demonstrate that reasonable potential no longer exists, effluent limitations for ammonia nitrogen may not be carried over in future permits based on the new information.

Data from Control Stations 4 and 5 (located well beyond the ZOM) were used in evaluating assimilative capacity of the receiving water, and were not used in determining reasonable potential. Those contributing to the receiving water (e.g., effluent or other contributors such as surface water, groundwater, etc.) are irrelevant in determination of assimilative capacity.

4. Part D.2.e(4), Page 18 and 19, 4th thru 6th Paragraph:
   a. The County does not agree that it is appropriate to specify Discharge Limitations on the basis of "performance-based effluent limitations" and requests that the 4,300 µg/l "Performance-based limit" for ammonia nitrogen be specified as a Threshold Value as with previous permits for the facility.

i. The County notes that the facility is operating well below design flows (0.08 MGD Average Influent Flow between January 2008 and January 2014) which is 24% of the Design Average Flow for the facility (0.35 MGD). The facility was not designed for ammonia (or other nutrient removal). The underloaded condition is primarily responsible for achieving low ammonia concentrations.

1) As such, specification of a Discharge Limitation based on performance of the facility while it is under loaded results in a likely reduction of the facility's treatment capacity, especially in light of the Anti-backsliding regulations referenced in Paragraph 6.

ii. The County notes that in a letter to the Natural Resources Defense Council (NRDC) on December 12, 2012 the EPA denied the NRDC's request for implementation of technology based nutrient limitations on the basis that the need to control nutrients is highly site-specific and could result in extremely high costs regardless of whether or not the facility was causing or contributing to water quality problems.

1) In the case of Papaikou WWTP, as noted in the FACT SHEET, ammonia nitrogen concentrations have decreased approximately 69 percent within the last four (4) years and assimilative capacity has been granted for ammonia nitrogen based on the declining nutrient concentrations.

2) Imposition of a "Performance-based Discharge Limitation" without determining the actual effect of the discharge to water quality in the receiving water; especially as retrofitting of the facility at extremely high expense to achieve nutrient removal as flows to the facility increase; is arbitrary and in that regard is similar to the imposition of Technology-based Effluent Limitations without regard to the actual effect to the environment.

iii. The County notes that as Part D.3 of the Public Notice Permit requires that a dilution analysis study including verification of the presence or absence of assimilative capacity for ammonia nitrogen be performed as a part of the permit requirements **and** as Part D.3.b allows modification of the permit to include new effluent limitations or permit conditions based on the study; that it is more appropriate to specify any Discharge Limitations for ammonia nitrogen upon completion of the required study.

**Response:** As stated in the Fact Sheet, reasonable potential to exceed applicable WQS for ammonia nitrogen has been established. Where reasonable potential has been determined for HAR §11-54-6(b)(3) pollutants, limitations must be established that are protective of water quality. Because the dilution at the edge of the ZOM is not known, end-of-pipe water-quality based effluent limitations cannot be determined. Thus, where assimilative capacity exists this permit establishes limitations for Section 11-54-6(b)(3) pollutants as performance-based effluent limitations and receiving water limitations and requires the Permittee to conduct a dilution analysis at the edge of the ZOM. Alternatively, the permit would have had to apply the standard directly at the end-of-pipe.

DOH recognizes the concerns of the Discharger regarding the potential for costly facility upgrades to comply with the final end-of-pipe limitations. However, the permit requires the Discharger to conduct a ZOM Dilution Analysis Study, in which the Discharger shall evaluate dilution and verify the presence or absence of assimilative capacity for ammonia nitrogen within 3 years of the effective date of the permit. Thus, appropriate end-of-pipe limitations may be established during future permitting efforts. If assimilative capacity is available, and additional data demonstrate that reasonable potential no longer exists, effluent limitations for ammonia nitrogen may not be carried over in future permits based on the new information.

The performance-based effluent limitations were based on data from September 2008 through August 2013 using the maximum observed concentration for ammonia nitrogen. (In addition, the DOH reviewed the latest ammonia nitrogen data available, up through March 2014, and additional historic data beginning in January 2008. None of the data reported exceeded the 4,300 µg/l performance based limit). DOH finds that the current effluent limitation is representative of current facility operations, as the Discharger would have 100% compliance with the current effluent limitations based on the data from January 2008 to March 2014 (over 6 years of data). The intent of performance-based effluent limitations is to ensure that the current performance of the facility is maintained and that further degradation of the receiving water does not occur over the term of the proposed permit.

Regardless if the facility is operating below design flows, the applicant has not provided information to substantiate that an increase in flow would result in increased ammonia nitrogen concentrations. The DOH agrees that should there be an increase in flow, there would be a corresponding increase in mass loading. However, as documented on Page 4 (note 3) of the permit, the mass-based effluent limitations are based on the facility design flow of 0.35 MGD (not the current operating flow).

5. Part D.2.g(1) Page 20:
   a. The County does not agree that a 7 CFU/100 ml enterococcus limit is applicable to this facility and that concentrations exceeding 7 CFU/100 ml results in “degradation of water quality”.
      i. There is no regulatory basis for imposition of an Effluent Discharge Limitation below limits established under HAR§11-54-8(b).

1) In effect, if meeting of the enterococcus limits established under the Water Quality Standard (WQS) results in "degradation of water quality" as the DOH indicates, this appears to conflict with the general policy provisions of HAR§11-54-1.1 of establishing standards to "protect the existing uses".

**Response**: As stated in Section D.2.g (page 20) of the Fact Sheet and consistent with HAR §11-54-1.1(b) and 40 CFR 131.12, where the quality of the waters **exceed levels necessary** to support propagation of fish, shellfish, and wildlife and recreation in an on the water, the quality shall be maintained and protected unless the director finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the state's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the director shall assure water quality adequate to protect existing uses fully.

This does not conflict with the general policy and provisions of HAR§11-54-1.1 which states that "Existing uses and the level of water quality necessary to protect the existing uses shall be maintained and protected." The use of "degradation of water quality" above does not imply that the water quality no longer protects existing uses, but refers to any lowering of water quality. Consistent with HAR §11-54-1.1(b) and 40 CFR 131.12(a)(2), for water bodies where existing conditions are better than necessary to support CWA Section 101(a)(2) "fishable/swimmable" uses, water quality may not be lowered to less than the level necessary to fully protect the "fishable/swimmable" uses and other existing uses, and may be lowered even to those levels only after following all the provisions described in 40 CFR 131.12(a)(2).

ii. While the DOH implies that the 7 CFU/100 ml geometric mean effluent limitation is being applied as it is necessary to "to support propagation of fish, shellfish, and wildlife and recreation, in and on the water" the rationale is incorrect based on the following:

1) As indicated under Part D.2.g(1), 2nd paragraph, "the State enterococcus standard of 7 CFU per 100 milliliters was based mainly on health risk assessment, ***not as a regulatory limit***" whereas the DOH is now utilizing that standard as a regulatory limit in the Public Notice Permit with no regulatory basis.[emphasis added]

2) HAR §11-54-8(b) already establishes that enterococcus concentrations of 35 CFU/100 ml (geometric mean) and 104 CFU/100 ml (single sample maximum) are protective to support "recreation".

3) While Part D.2.g(1), 3rd paragraph, indicates that the Permittee "has not demonstrated degradation of the water quality is necessary to accommodate important economic or social development" this is incorrect as water quality is based on the Water Quality Standards (WQS) established under HAR §11-54 and as indicated above, ***compliance with the WQS should not constitute "degradation of the water quality".***

   a. The County also notes that the DOH has not provided any data substantiating that enterococcus concentrations above 7 CFU/100 ml has an adverse effect in supporting "propagation of fish, shellfish, and wildlife… in and on the water" and it is assumed that this was considered as part of the adoption of the new enterococcus standards by the DOH and EPA.

**Response**: The DOH is not implying that the enterococcus geometric mean effluent limit of 7 CFU/100 ml is being applied as it is necessary to "to support propagation of fish, shellfish, and wildlife and recreation, in and on the water". This effluent limitation is included in the permit based on the following. Clean Water Act (CWA) section 402(o)(l) prohibits the relaxation of effluent limitations (backsliding) for two situations, one of which (as in this case) is the relaxation of an effluent limitation that is based on state standards, such as water quality standards or treatment standards, unless the change is consistent with CWA section 303(d)(4) or if one of the exceptions in CWA section 402(o)(2) is met (e.g., new information other than revised regulations, guidance, or test methods…, technical mistakes or mistaken interpretations of the law which do not apply to WQBELs, etc.). The listed exceptions in CWA 402(o)(2) are not applicable in this case and thus, as specified under CWA section 303(d)(4)(B), the limit may only be relaxed where the action is consistent with the state's antidegradation policy.

As stated in the Fact Sheet, and consistent with HAR §11-54-1.1(b) and 40 CFR 131.12 (Antidegradation policy)**, where the quality of the waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation** in an on the water, the quality shall be maintained and protected unless the director finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the state's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. Because the Permittee has the facilities necessary to achieve compliance with the previous effluent limitation, and has not demonstrated degradation of water quality is necessary to accommodate important economic or social development, the maximum monthly geometric mean limitation of 7 CFU per 100 milliliters from the previous permit is carried over.

As stated above, the use of "degradation of water quality" does not imply that the water quality no longer protects existing uses, but refers to any lowering of water quality. Please also see DOH Response to Comment No. 5.a.i above.

iii. The County also notes that DOH's position conflicts with Part B.1.a(1) of the Public Notice Permit which clearly states that "Within 300 meters of the shoreline, including natural public bathing or wading areas, enterococci content ***shall not exceed a geometric mean of 35 CFU per 100 milliliters…***" [emphasis added]

**Response**: Based upon your comment, the DOH has reevaluated Part B.1.a(1), Specific Water Quality Criteria for Recreational Waters. As the enterococci limitation specified in Part A.1 of the permit (7 CFU/100 ml) is more stringent than that of recreational waters (35 CFU/100 ml), the DOH has determined that the enterococci limitation as specified in Part A.1 will ensure that the facility is in compliance with the recreational waters limitation and thus, has removed Parts B.1.a.(1), (2), and b from the permit. The requirements of Part B.1.a.(3), including requirements for posting warning signs have been included in Part H.7 of the permit, under Special Conditions.

iv. The County further notes that the DOH's position further conflicts with Part B.1.b of the Public Notice Permit which clearly states that ***"Compliance with the water quality criteria listed in Part B.1, above, shall be measured at the end of pipe as described in Part A.1 of this permit."*** [emphasis added]

**Response:** Parts B.1.a.(1), (2), and b have been removed from the permit. See DOH Response to Comment No. 5.a.iii above.

6. Part E.1, Page 23, 1st Paragraph:
   a. The paragraph should be revised to clarify that the "Maximum Reported Concentration" in Table F-8 is effluent data versus ZOM Monitoring Data.

      i. While it is recognized that the paragraph indicates that the data is "effluent quality monitoring results", Table F-8 heading indicates that it contains "ZOM Monitoring Data".

**Response:** As stated in the Fact Sheet, the maximum reported concentrations shown in Table F-8 are effluent quality monitoring results that were provided in the ZOM application.

7. Part E.3.a(3)(a), Page 25 and 26, 2nd Paragraph:
   a. Typographical error – CFU versus "CFO"

**Response**: Permit revised to correct "CFO" to CFU.

   b. As indicated in our comments for Part D.2.g(1), the County does not agree that there is a basis for the 7 CFU/100 ml Discharge Limitation being applied for enterococcus.

**Response**: See DOH Response to Comment No. 5 above.

***PUBLIC NOTICE PERMIT, March 6, 2014***

1. Part A.1, Page 3, Chlorine Effluent Mass Discharge Limitation:
   a. The County does not agree that mass based limitations should be applied to Chlorine.

      i. As toxicity is concentration based, application of mass limits does not apply.

      ii. The County further notes that a dechlorination process is utilized at the facility in order to achieve adequate disinfection as well as to comply with the Total Residual Chlorine Discharge Limitation of 13 µg/l; which is equivalent to the acute aquatic life water quality standard under HAR§11-54.

         1) As such, imposition of mass based limit has no relevance.

**Response:** Establishing mass-based effluent limitations is consistent with HAR 11-55-20 and 40 CFR 122.45(f). Section 5.7.1 of the EPA Technical Support Document for Water Quality-based Toxics Control (TSD) also states that "Mass limitations in terms of pounds per day or kilograms per day can be calculated for all chemical-specific toxics such as **chlorine** or chromium. ……. For example, a permit limit of 10 mg/l of cadmium discharged at an average rate of 1 million gallons per day also would contain a limit of 38 kilograms/day of cadmium."

2. Part A.1, Page 3, Enterococci Average Monthly Discharge Limitation:
   a. The Average Effluent Discharge Limitation of 7 CFU/100 ml specified for Enterococci should be revised to a Discharge Limitation of 35 CFU/100 ml as specified under HAR §11-54-8(b), Marine Recreational Waters as there is no regulatory basis for implementation of the 7 CFU/100 ml limit.

      i. Refer to the County's comments under Parts D.2.g(1) and E.3.a(3)(a) of the FACT SHEET.

**Response**: See DOH Response to Fact Sheet Comment No. 5 above.

3. Part A.1, Page 4, Enterococci Analysis:
   a. Footnote 6 should be revised to allow analysis to be performed using permitted methods of 40 CFR 136.

**Response:** Permit revised to reference 40 CFR 136 in Footnote 6.

4. Part A.1, Effluent Limitation Table, Page 4:
   a. The County requests that Ammonia Nitrogen limits which were established as a "performance-based limit" be revised to Threshold Values pending completion of the dilution analysis study including verification of the presence or absence of assimilative capacity for ammonia nitrogen required under Part D.3 of the Public Notice Permit.

i. Refer to the County's comments under Part D.2.e(4) of the FACT SHEET.

**Response**: See DOH Response to Fact Sheet Comment No. 4 above regarding ammonia nitrogen limits and Part D.2.e(4) of the Fact Sheet.

b. Remove influent sampling for Nitrate + Nitrite Nitrogen.

i. As nitrate + nitrite nitrogen is seldom observed in significant concentrations in raw wastewater and is instead a result of nitrification of the treatment process, influent monitoring of nitrate + nitrite nitrogen serves no purpose.

**Response:** Influent monitoring is necessary to provide data to characterize facility influent for future permitting efforts and is consistent with other NPDES wastewater treatment plant permits issued.

5. Part A.3, Effluent Limitation Weekly Monitoring:
   a. Revise 1st sentence for clarity to "All influent and effluent monitoring shall be arranged so that each day of the calendar week is represented at least once every two (2) months *for discharge parameters monitored once per week*."

**Response:** Permit revised as requested.

6. Part B.1.b, Water Quality Criteria:
   a. Revise to measure enterococcus concentrations at the Effluent Facility as is currently being done in lieu of being measured "at the end of pipe".
      i. The outfall is located off a cliff and cannot be safely accessed for obtaining of samples as the "end of pipe".

**Response:** Parts B.1.a.(1), (2), and b have been removed from the permit. See DOH Response to Fact Sheet Comment No. 5.a.iii above.

7. Part B.2.c., Water Quality Criteria:
   a. Revise to indicate that "The discharge of treated wastewater through Outfall Serial No. 001 shall not cause the following water quality criteria *outside of the ZOM* to be violated."

**Response:** Part B.2.c shall remain as written. This section refers to the basic water quality criteria applicable to all waters as specified in HAR §11-54-4 as well as the toxicity criteria specified in HAR §11-54-4(b)(3). As stated on Page 12 of the Fact Sheet, dilution has been carried over for total nitrogen, ammonia nitrogen, nitrate + nitrite nitrogen, total phosphorus, turbidity, pH, chlorophyll a, temperature, dissolved oxygen, and salinity only. Part C of the permit, Zone of Mixing Limitations, specifies water quality criteria that may be exceeded within

the boundaries of the ZOM and shall not constitute a violation of this permit. Dilution is not granted for toxics, and as specified in Part B.2.c of the permit, the discharge of treated wastewater through Outfall Serial No. 001 shall not cause the water quality criteria for toxic pollutants as listed in HAR 11-54-4(b)(3) to be violated both in and outside of the ZOM.

8. Part B.2.c(4)vi, Water Quality Criteria:
   a. Delete paragraph pertaining to soil particles involving earthwork, construction, etc., as it does not pertain to the NPDES Permit for this facility.

**Response:** Part B.2.c(4) specifies the basic water quality criteria applicable to all waters as specified in HAR §11-54-4. This requirement shall remain to be consistent with other NPDES permits.

9. Part D.1, Offshore Water Quality Monitoring, 1st Table:
   a. Clarify that the station locations are identified utilizing NAD 83 coordinate system.

**Response:** Permit revised to reference NAD 83 coordinate system as requested.

10. Part D.2, Outfall Monitoring:
   a. Delete this section. The outfall discharges off a cliff and is not visible for inspection.

**Response:** Permit condition to remain. The outfall inspection is required once per permit term (once in 5 years) and is important to verify structural integrity, operational status, and maintenance needs. If conventional external inspection is infeasible or will not show structural integrity of the outfall, the County needs to consider alternative inspection methods such as the use of a remote aerial vehicle or internal inspection using closed circuit television (or equivalent) to observe/evaluate the outfall.

11. Part D.3, ZOM Dilution Analysis Study:

   a. Revise D.3.a(1) from "180 calendar days of the effective date of the permit" to "300 calendar days".

      i. The County does not have the expertise or resources to conduct the Dilution Analysis Study and to determine the presence or absence of assimilative capacity for ammonia nitrogen and will be required to procure the services of a consultant firm having the expertise to conduct the study.

      ii. The additional one hundred twenty (120) days is required in order to allow time for selection of a suitable consultant and execution of a consultant contract in accordance with State Procurement Rules as well as to address the level of detail specified for the work plan.

**Response:** The time allotted to complete the ZOM Dilution Analysis Study and associated milestones are consistent with the requirements of other NPDES permits in the State. Similar to other NPDES permits requiring a ZOM Dilution Analysis Study, the Study is due three years from the effective date of the permit to provide sufficient time to complete and review the study prior to the next permit renewal, and for permits with a compliance schedule, to minimize costs associated with the compliance schedule if assimilative capacity is demonstrated to be available.

The Study milestones are incorporated within the permit to maintain progress and ensure the end goal is completed in the desired timeframe. The proposed permit provides approximately six months (180 days) for the Discharger to propose a work plan, up to nine months to implement a Work Plan, and two (2) years to provide an update and any preliminary data. The actual analysis is not due for three years after the effective date of the permit, providing sufficient time to secure funding for the bulk of the cost associated with the ZOM Dilution Analysis Study. The Discharger does not provide sufficient rationale/justification to support moving back the Study milestones. The Discharger does not provide details as to why an additional 120 days (beyond the specified 6 month time frame) is needed to select a suitable consultant or discuss whether there are options for the Discharger to expedite the procurement and funding procedures.

b. Revise D.3.a(1), last sentence from "Within nine (9) months of the effective date of this permit" to "*Within six (6) months of receipt of final review comments from the DOH*, the Permittee shall initiate implementation of the Work Plan with any necessary revisions *unless otherwise authorized by the DOH*."

    i. As the County has no control over the review time required for the DOH, implementation of the Work Plan is required to be contingent on the receipt of final comments from the DOH.

    ii. As the Scope of Work for the actual Dilution Analysis Study and determination of assimilative capacity is dependent on the Work Plan and incorporation of DOH comments; the six (6) month period would be utilized for development the scope of work, obtain funding, and obtain the services of a firm specializing in this type of work.

    iii. Allowing DOH some discretionary authority regarding implementation schedules is required in order to allow for unforeseen circumstances which may affect implementation of the study and are beyond the control of the County.

**Response:** Paragraph remains as the intent is that the Work Plan is to be implemented within nine (9) months of the effective date of this permit. The proposed permit provides approximately six months for the Discharger to propose a work plan, and up to nine months to implement a Work Plan. The permit does not require the Discharger to receive DOH approval of

the plan, only that DOH comments be incorporated into the plan within three months of work plan submittal. If there are no comments from the DOH, the Work Plan should be implemented as proposed. The language is consistent with other NPDES wastewater treatment plant permits issued in the State. Also, see DOH Response to Comment No. 11.a above.

c. Revise D.3.a(2) to "*Within one (1) year after implementation of the Work Plan*, the Permittee shall provide an update to DOH on the status of the dilution analysis and provide any preliminary data and results available at that time *unless otherwise authorized by the DOH.*"

   i. Timelines based on the actual implementation of the Work Plan would result in better interim data being provided to the DOH.

   ii. Allowing DOH some discretionary authority regarding reporting is required in order to allow for unforeseen circumstances during the implementation phase such as, but not limited to, inclement weather, etc. which may affect implementation of the study and are beyond the control of the County.

      1) Based on a previous Dilution Study conducted for another facility, dilution studies are optimally conducted over a 24 hour period covering the widest range of high and low tides to monitor mixing and dilution over the full tide range. As such, implementation is also affected by natural events which are beyond the control of the County. Should inclement weather occur during the period having the widest range of high and low tides, it is possible that this could result in rescheduling of the Dilution Study months later in order to take advantage of predicted tidal conditions.

**Response:** Paragraph remains as is as the intent is that an update be provided to the DOH on the status of the analysis and any preliminary data and results within two (2) years of the effective date of the permit. This milestone is an update on status of the analysis and two (2) years from the effective date of the permit should be sufficient time to provide the requested information. See DOH Response to Comment Nos. 11.a and 11.b above.

d. Revise D.3.a(3) to "*Within two (2) years after implementation of the Work Plan*, the Permittee……assimilative capacity of ammonia nitrogen unless *otherwise authorized by the DOH*."

   i. As with the County's comment for D.3.a(2), timelines based on the actual implementation of the Work Plan are more appropriate as actual data and analysis occurs after implementation of the Work Plan.

ii. Allowing DOH some discretionary authority regarding reporting is required during the implementation phase such as, but not limited to, inclement weather, etc. in order to allow for unforeseen circumstances which may affect implementation of the study and but are beyond the control of the Permittee.

iii. The County notes that the timelines proposed above result in a final report being submitted approximately 3 years 7 months after the effective date of the permit subject to the following:

1) Review comments from the DOH provided within ninety (90) days of the submission of the Work Plan to DOH for review.

2) Unforeseen circumstances which may affect implementation of the study but are beyond the control of the Permittee.

3) As permit renewal applications are required to be submitted 180 days before the existing permit expires as per Standard NPDES Permit Condition 5, receipt of the final report in the proposed 3 year 7 month time period would allow more than adequate time for the DOH to review the final report prior to issuance of a new permit.

**Response:** Paragraph remains as is. See DOH Response to Comment Nos. 11.a, b, and c above.

12. Part D.4, Annual Receiving Water Monitoring Programs:

a. Wording under Part D.4.a should be incorporated under Part D.1 rather than under Annual Monitoring Programs as the information would have to be obtained during actual sampling. It is recommended that the wording be added as a footnote under the table containing water quality parameters to be sampled.

**Response**: This requirement shall remain to be consistent with other permits. However, based on your comment, footnote 4 has been added to the water quality parameters table in Part D.1 of the permit to refer to Part D.4 requirements: "[4] Refer to Part D.4 for Annual Receiving Water Monitoring Program requirements."

b. Delete all references to "grain size, distribution of bottom sediment, rocks, and shell litter calcareous worm tubes, etc. under Part D.4.b.

i. The relevance of these items are questionable at best, as Part D.1, Water Quality Monitoring Parameters, Footnote 1 indicates that samples be obtained "2 meters above the bottom".

**Response**: As required by HAR §11-54-9(c)(6)(C), every zone of mixing established under this section shall include, but not be limited to, conditions requiring the applicant to perform appropriate effluent and receiving water sampling including monitoring of bottom biological communities and report the results of each sampling to the director. This requirement is important in characterization of the sampling stations, to indicate any year to year differences, and to assess the impact to marine bottoms.

c. Wording under Part D.4.c should be incorporated under Part D.1 rather than under Annual Monitoring Programs as the information would have to be obtained during actual sampling. It is recommended that the wording be added as a footnote under the table containing water quality parameters to be sampled.

**Response:** This requirement shall remain to be consistent with other NPDES permits. However, based on your comment, footnote 4 has been added to the water quality parameters table in Part D.1 to refer to Part D.4 requirements. "[4] Refer to Part D.4 for Annual Receiving Water Monitoring Program requirements."

d. Wording under Part D.4.d should be incorporated under Part D.1 rather than under Annual Monitoring Programs as any variations require DOH approval and must be reported with analytical results.

**Response**: This requirement shall remain to be consistent with other NPDES permits. However, based on your comment, footnote 4 has been added to the water quality parameters table in Part D.1 to refer to Part D.4 requirements. "[4] Refer to Part D.4 for Annual Receiving Water Monitoring Program requirements."

13. Part F.1.g(3), Sludge/Biosolids Requirements:

a. Delete "*and that vector attraction reduction requirements have been met by the municipal solids waste landfill*" from the certification statement.

i. Operation of the solid waste landfill is not under the purview of the treatment facility and is governed instead by a Solid Waste permit.

**Response**: This is the standard certification statement required by all Dischargers disposing sludge in a MSWLF. While the implementation of the vector attraction reduction requirements are the responsibility of the MSWLF operator, the Discharger is responsible for verifying that such measures are in place.

14. Part G.1.a, Reporting Requirements:

a. Revise "30 calendar days after the effective date of this permit" to "ninety (90) calendar days" as currently specified under Part G.1.a of the existing permit for the facility.

i. The proposed permit contains significant changes to the existing permit and as such additional time is required in order to update existing Monitoring Programs for the facility.

**Response**: The deadlines for the submissions of the plans shall remain at 30 days. This is an existing facility that should already have current effluent and receiving water monitoring programs in place. As the specified pollutants requiring monitoring are unchanged from the existing permit, much of the program contents including that specified in Part G.1.a (3) (i.e., sampling holding times, preservation techniques, test methods, quality control measures, etc.) should already be included in the current monitoring programs. This 30 day requirement is consistent with other NPDES wastewater treatment plant permits.

15. Part G.2.f(1). Schedule of Submission:

a. Revise "ZOM Dilution Analysis Study Work Plan Report Due Date" from "180 days after permit effective date" to "300 calendar days" as requested under comments to Part D.3.

**Response:** Permit to remain as is. See DOH Response to Comment No. 11 above.

b. Revise "ZOM Dilution Analysis Study Report Due Date" from "3 years after permit effective date" to "Within (2) years after implementation of the Work Plan" as requested under comments to Part D.3.a(3).

**Response:** Permit to remain as is. See DOH Response to Comment No. 11 above.

c. Add footnote to "ZOM Dilution Analysis Study Report Due Date" to indicate that extension of the due date is subject to DOH authorization.

**Response:** Permit to remain as is. See DOH Response to Comment No. 11 above.

16. Part G.5, Planned Changes:

a. Delete Part G.5.

i. Standard NPDES Permit Conditions 16.3 a.(1), (2), (3) essentially requires reporting for significant alterations or additions to a permitted facility.

ii. Part G.5, as written requires that any alteration or additions be reported which is unrealistic and serves no purpose.

1) For example, as written, replacement of a light fixture with a different model or installation of an additional light fixture would be reportable.

2) Reporting of minor alterations or additions clearly avoided in the Standard NPDES Permit Conditions as it serves no purpose other than increasing bureaucratic requirements which have no effect on the treatment process.

**Response:** Permit revised to remove Part G.5 as suggested.

17. Part I, Location Map:

a. The Location Map provided as Figure 1 is the location map for "Sludge Disposal Location" in lieu of a location map for the facility.

**Response**: Permit revised. Map provided as Figure 1 deleted from permit.

**Final Determination**

The DOH has taken the comments received into consideration and has made the necessary amendments to the subject documents. There were no substantive changes made to the proposed permit, therefore DOH intends to issue the proposed permit with the revisions.